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# Construction Rules for the Morningstar® US Target Value Index<sup>SM</sup>

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## Morningstar Indexes

April 2020

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### Overview

The Morningstar® US Target Value Index<sup>SM</sup> provides exposure to liquid US equities that display low price to earnings ratio, low price to cash flow ratio, low price to book value ratio, low price to sales ratio, and upward revisions of fiscal earnings estimates.

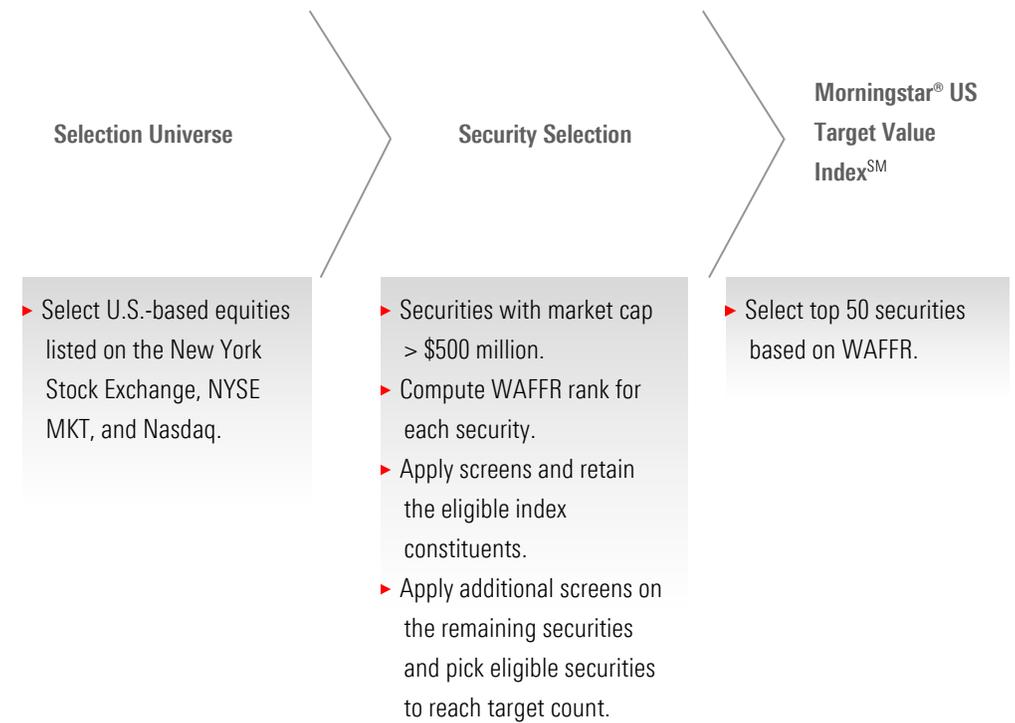
This index does not incorporate Environmental, Social, or Governance (ESG) criteria.

### Index Inception Date and Performance Inception Date

The inception date of the index is September 16, 2013 and the performance inception date of the index is December 21, 2001, when the first back-tested index value was calculated.

## Index Construction

**Exhibit 1** Morningstar US Target Value Index Construction Process



For additional details, refer to the "Assigning stocks to the Index" section.

### Assigning Stocks to the Index

#### Selection Universe

At each reconstitution, securities for the Morningstar US Target Value Index are derived from eligible universe described below.

- ▶ Security must trade on one of the three major exchanges: New York Stock Exchange, NYSE MKT, or Nasdaq.
- ▶ Issuer must be classified as a U.S. issuer based on country of incorporation, primary stock market activities, location of headquarters, and primary business activities.
- ▶ Security must be an equity. Additionally, the following security types do not qualify:
  - ▶ American depositary receipts and American depositary shares
  - ▶ Limited partnerships
  - ▶ Preferred shares
  - ▶ Convertible notes, warrants, and rights

### Security Selection

To be eligible for the index, all constituents must meet the following criteria in sequence:

- ▶ Market capitalization greater than \$500 million.
- ▶ At each reconstitution, securities in the investable universe are assigned a weighted average fundamental factor rank, or WAFFR, based on the following five factors (see Appendix A for definitions).
- ▶ Price/earnings, Price/Cash Flow, Price/Sales are all calculated using trailing EP, Cash flow and Sales respectively from the four most recently reported quarters.

Fundamental Factor	Strategy Weight
Price/earnings ratio	20%
Price/ cash flow	20%
Price/Sales	20%
Current price/book ratio	20%
3-month EPS estimate revision	20%

WAFFR for each security is determined at each rebalance as follows:

- ▶ For each fundamental factor, securities are ranked and scored from 0 to 100 (lower to higher WAFFR value). A composite score is then calculated as the weighted average of the fundamental factor scores, where the weights are the strategy weights assigned to each factor.
- ▶ Securities meeting the index eligibility are now selected in the following manner:
  - ▶ Rank order securities by their WAFFR.
  - ▶ Current index constituents meeting all the following criteria are retained in the index:
    - ▶ Ranks in the top 40% by WAFFR.
    - ▶ 3-month EPS estimate revision > -15%.
  - ▶ Additional securities are added to the index in order of WAFFR until we reach the target index count, if they meet all the following conditions:
    - ▶ Rank in the top 30% by WAFFR.
    - ▶ 3-month EPS estimate revision > -10%.
    - ▶ Three-month Average Daily Dollar Volume for the Security does not lie in the bottom 1/6th(16.7%) of the Securities in the selection universe
  - ▶ Index does not exceed a cap of eight securities per GICS sector

### Number of Stocks

The index contains 50 stocks subject to selection and eligibility criteria at reconstitution. However, if securities fall short of the selection and eligibility criteria, or if securities are added or deleted as a result of corporate actions after reconstitution, the index can have more or fewer than 50 securities. During reconstitution, if the number of securities is less than the target, the weight of the constituents will be determined based on the index weighting scheme. The schedule for reconstitution and corporate actions is available in the "Index Maintenance and Calculation" section.

### **Index Weighting**

The index is equal weighted. For more details, refer to the [Morningstar Indexes Calculation Methodology rulebook](#).

### **Index Maintenance and Calculation**

#### **Scheduled Maintenance**

The index is reconstituted and rebalanced quarterly and implemented after the close of business on the last business day of February, May, August, and November and is effective the following business day. The market data used for reconstitution and rebalance is as of the seven business days before the effective date of the reconstitution.

Refer to Appendix 1 for details on reconstitution and rebalancing.

#### **Corporate Action**

The treatment of corporate actions can be found in the [Morningstar Indexes Corporate Actions Methodology rulebook](#). Moreover, the below corporate actions explicitly affect the Index.

#### **Spin-Offs**

Issues spun off by index holdings (parent company) are not added to the index but will be considered for inclusion at the next reconstitution. The weight of the parent company is reduced by a factor of the spin-off conversion ratio, whose weight is the product of original shares and new price. A divisor adjustment is made to reflect the decrease in market value.

#### **Mergers and Acquisitions**

If an index constituent acquires or merges with another index constituent, original constituents are replaced by a security of the successor entity, which carries the combined weight of the original index constituents. A divisor adjustment is not necessary because the index market value remains unchanged.

If an index constituent acquires or merges with a nonconstituent, the original constituent is replaced by a security of the successor entity, which carries same weight as the original index constituent. A divisor adjustment is not necessary because the index market value remains unchanged.

If an index constituent is acquired by a nonconstituent, the original index constituent is dropped from the index. A divisor adjustment is made to reflect the decrease in market value.

#### **Share Repurchase/Offering**

If an index constituent issues or repurchases shares, the new share capital structure is considered at the next rebalancing. No divisor adjustment is necessary.

**Delisting, Bankruptcy, and Financial Distress**

If an index constituent is delisted by its principal exchange, enters bankruptcy proceedings, or is under extreme financial distress, it is removed from the index. Exceptions are made on a case-by-case basis. For example, a security might not be removed immediately when a bankruptcy filing is not a result of operating or financial difficulties. A divisor adjustment is made to reflect the decrease in market value.

**Change in Security Eligibility**

If a constituent ceases to meet the selection universe eligibility criteria because of a corporate event like delisting or change in country of incorporation, it is removed from the index. A divisor adjustment is made to reflect the decrease in market value.

**Loss of Liquidity**

If a constituent accumulates 10 consecutive nontrading days between reconstitution dates, it is removed from the index. Two business days' notice of its removal is provided. A divisor adjustment is made to reflect the decrease in market value.

**Index Calculation and Price Data**

Details about index calculations and price data can be found in their respective rulebooks: [Morningstar Indexes Calculation Methodology](#) and [Equity Closing Prices Used for Index Calculation](#).

**Methodology Review and Index Cessation Policy**

The index methodology is continually reviewed to ensure it achieves all stated objectives. These reviews take into account corporate action treatment, selection, and maintenance procedures. Subscribers to the index will be notified before any methodology changes are made. For more details, refer to the [Morningstar Index Methodology Change Process](#).

Morningstar also notifies all subscribers and stakeholders of the index that circumstances might arise that require a material change to the index, or a possible cessation of the index. Circumstances that could lead to an index cessation include, but are not limited to, market structure change, product definition change, inadequate supply of data, insufficient revenue associated with the index, insufficient number of clients using the index, and/or other external factors beyond the control of the Morningstar Index Committee.

Because the cessation of the index or benchmark index could disrupt subscriber products that reference this index, all subscribers are encouraged to have robust fallback procedures if an index is terminated. For more details, refer to the [Morningstar Index Cessation Process](#).

## **Data Correction and Precision**

### **Intraday Index Data Corrections**

Commercially reasonable efforts are made to ensure the accuracy of data used in real-time index calculations. If incorrect price or corporate action data affect index daily highs or lows, they are corrected retroactively as soon as is feasible.

### **Index-Related Data and Divisor Corrections**

Incorrect pricing and corporate action data for individual issues in the database will be corrected upon detection. In addition, an incorrect divisor of an index, if discovered within five days of its occurrence, will always be fixed retroactively on the day it is discovered to prevent an error from being carried forward. Commercially reasonable efforts are made to correct an older error subject to its significance and feasibility.

For more details, refer to the [Recalculation Guidelines](#).

### **Computational and Reporting Precision**

For reporting purposes, index values are rounded to two decimal places and divisors are rounded to appropriate decimal places.

## Appendixes

### Appendix 1: Glossary

Terms	Description
<b>Reconstitution</b>	During each reconstitution, the steps mentioned in the index construction process are performed, resulting in membership reset.
<b>Rebalance</b>	During each rebalancing, the weights are adjusted for updated free-float and shares outstanding data.
<b>Market capitalization</b>	Market capitalization is the total dollar value of a company's publicly listed shares, calculated as the product of the closing price as of the latest market close and the total number of shares currently listed for trading.
<b>Price to earnings ratio</b>	Trailing P/E is calculated by taking the current stock price and dividing it by the trailing earnings per share for the four most recently reported quarters. Low values are best.
<b>Price to latest cash flow</b>	Price to cash flow based on trailing cash flow is the ratio of a company's price to its trailing four quarters of cash flow from operations. Low values are best.
<b>Current price to book ratio</b>	Price to book is the ratio of a company's latest price per share to the per share value of its common share equity (book value). Low values are best.
<b>Price to latest four quarter sales</b>	Price to Sales is the ratio of a company's price to its trailing four quarters of sales. Low values are best.
<b>3-month EPS estimate revision</b>	Three-month EPS estimate revision measures the percentage change over the past three months in the median analysts' fiscal earnings estimate for a company's current fiscal year. For example, an estimate revision of 15% means that the current year earnings estimate has been raised by 15% over the past three months. High values are best.

### Appendix 2: Modification to Rulebook

Section	Description	Update Date
<b>Name change</b>	Index name was changed from Morningstar US Value Target 50 Index to Morningstar US Target Value Index	October 2014
<b>Added Liquidity Screen</b>	Included an additional liquidity screen so that only securities that lie above the bottom 1/6th(16.7%) of the securities in the selection universe when ranked by the Three-month Average Daily Dollar Volume can be added to the portfolio	May 2017

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**About Morningstar Indexes**

Morningstar® Indexes combine the science and art of indexing to give investors a clearer view into the world's financial markets. Our indexes are based on transparent, rules-based methodologies that are thoroughly back-tested and supported by original research. Covering all major asset classes, our indexes originate from the Morningstar Investment Research Ecosystem—our network of accomplished analysts and researchers working to interpret and improve the investment landscape. Clients such as exchange-traded fund providers and other asset management firms work with our team of experts to create distinct, investor-focused products based on our indexes. Morningstar Indexes also serve as a precise benchmarking resource.

**Morningstar Index Product Committee**

The Morningstar Index Product Committee is comprised of members who possess a wide array of knowledge in relation to Indexes. The Product Committee is responsible for the governance over the creation and maintenance of all Morningstar branded Indexes, ensuring the highest standards are continuously met. Any matters arising from exceptional or undocumented events will be resolved at the discretion of the Morningstar Index Product Committee.

**Morningstar Index Product Committee**

The Morningstar Index Oversight Committee is comprised of informed and qualified professionals who are responsible for the process governance of Morningstar branded Indexes. The Oversight Committee assesses and where appropriate challenges the decisions of Morningstar Indexes with regards to benchmark decisions.

**For More Information**

For any queries, reach out to us via our [communication page](#).



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